BRUHAT BANGALORE MAHANAGAR PALIKE

Name of Work: Construction of RCC Drains and Culverts at Anugraha layout, Muniswamappa layout and Sai Nagar-2 And Surrounding area in ward No. 03, Yelahanka Satellite Town sub Division

Modified Estimate

JOB NUMBER: Sl No.4 Est Amount= 175.00 Lakhs

Sl. No	Description of Work	Unit	No	Dimension L	Dimension B	Dimension D	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB300-1. Earthwork Excavation by manual means for roads, Drains and similar works in ordinary soil excavated surface levelled and neatly dressed. KPWD S.R 2019-19 It No 19.10 Pg. No. 130.								
	CC Drain								
	Sai Nagar Phase-2								
	LHS Ch:00-234 1st Main Road	Cum	1	234.00	1.10	1.00	257.40		
	RHS Ch:00-213 1st Main Road		1	213.00	1.10	1.00	234.30		
	LHS Ch:00-250 2nd Main Road		1	250.00	1.10	1.00	275.00		
	RHS Ch:00-52 1st Cross Road		1	52.00	1.10	1.00	57.20		
	LHS Ch:00-52 1st Cross Road		1	52.00	1.10	1.00	57.20		
	LHS Ch:00-44 7th Cross Road		1	44.00	1.10	1.00	48.40		
	RHS Ch:00-54.3 7th Cross Road		1	54.30	1.10	1.00	59.73		
	LHS Ch:00-101.9 8th Cross Road		1	101.90	1.10	1.00	112.09		
	RHS Ch:00-97.1 8th CrossRoad		1	97.10	1.10	1.00	106.81		
	Anugraha layout								
	LHS Ch:00 - 130 2nd cross road		1	130.00	1.10	1.00	143.00		
	RHS Ch:00 - 131 2nd cross road		1	131.00	1.10	1.00	144.10		
	New Kerb								
	Sai Nagar Phase-2								
	LHS Ch:00-234 1st Main Road		1	234.00	0.20	0.20	9.36		
	RHS Ch:00-213 1st Main Road		1	213.00	0.20	0.20	8.52		
	LHS Ch:00-250 2nd Main Road		1	250.00	0.20	0.20	10.00		
	LHS Ch:00-101.9 8th Cross Road		1	101.90	0.20	0.20	4.08		
	RHS Ch:00-97.1 8th CrossRoad		1	97.10	0.20	0.20	3.88		
	Anugraha layout								
	LHS Ch:00 - 130 2nd cross road		1	130.00	0.20	0.20	5.20		
	RHS Ch:00 - 131 2nd cross road		1	131.00	0.20	0.20	5.24		
	New Culvert								
	Cross Road		9	6.90	1.50	1.15	107.12		
						Total Qty	1648.63	211.79	349163.88
2	KSRRB M2900-1. Plain cement concrete M10 mix with crushed stone aggregate 40mm nominal size mechanically mixed, placed in foundation. KPWD S.R 2018-19 It No. 34.1 Pg No. 254.								
	CC Drain								
	Sai Nagar Phase-2								
	LHS Ch:00-234 1st Main Road	Cum	1	234.00	1.10	0.15	38.61		
	RHS Ch:00-213 1st Main Road		1	213.00	1.10	0.15	35.15		
	LHS Ch:00-250 2nd Main Road		1	250.00	1.10	0.15	41.25		
	RHS Ch:00-52 1st Cross Road		1	52.00	1.10	0.15	8.58		
	LHS Ch:00-52 1st Cross Road		1	52.00	1.10	0.15	8.58		
	LHS Ch:00-44 7th Cross Road		1	44.00	1.10	0.15	7.26		
	RHS Ch:00-54.3 7thCross Road		1	54.30	1.10	0.15	8.96		
	LHS Ch:00-101.9 8th Cross Road		1	101.90	1.10	0.15	16.81		
	RHS Ch:00-97.1 8th CrossRoad		1	97.10	1.10	0.15	16.02		
	Anugraha layout								
	LHS Ch:00 - 130 2nd cross road		1	130.00	1.10	0.15	21.45		
	RHS Ch:00 - 131 2nd cross road		1	131.00	1.10	0.15	21.62		
	New Kerb								
	Sai Nagar Phase-2								
	LHS Ch:00-234 1st Main Road		1	234.00	0.20	0.10	4.68		
	RHS Ch:00-213 1st Main Road		1	213.00	0.20	0.10	4.26		
	LHS Ch:00-250 2nd Main Road		1	250.00	0.20	0.10	5.00		
	LHS Ch:00-101.9 8th Cross Road		1	101.90	0.20	0.10	2.04		
	RHS Ch:00-97.1 8th CrossRoad		1	97.10	0.20	0.10	1.94		

	Anugraha layout									
	LHS Ch:00 - 130 2nd cross road			1		130.00	0.20	0.10	2.60		
	RHS Ch:00 - 131 2nd cross road			1		131.00	0.20	0.10	2.62		
	New Culvert										
	Cross Road			9		6.90	1.50	0.15	13.97		
								Total Qty	261.397	4479.56	1171135.41
3	KSRRB M2200-6. Providing bars Fe 500 steel reinforcement for RCC work includuing straightning, cutting, bending, hooking, placing in position , lapping and/or welding whereever required. KPWD S.R 2018-19			It No		28.8.2		Pg No.	229		
	One cubic mt 60 kg For CC Drain	T		1		22.83			22.83		
	One cubic mt 90 kg For Culvert			1		6.51			6.51		
								Total Qty	29.34	72326.98	2122073.59
4	Providing and laying plain/reinforced cement concrete for side drain wall and bottom thickness 15cm using M20 nominal mix concrete with OPC @ 300 kgs. With 20mm and down size granite metal coarse aggregates complete as per specifications. KPWD S.R 2018-19			It.No.		37.59.1		Pg No.	271		
	CC Drain										
	RAFT CONCRETE										
	Sai Nagar Phase-2										
	LHS Ch:00-234 1st Main Road			1		234.00	1.00	0.15	35.10		
	RHS Ch:00-213 1st Main Road			1		213.00	1.00	0.15	31.95		
	LHS Ch:00-250 2nd Main Road			1		250.00	1.00	0.15	37.50		
	RHS Ch:00-52 1st Cross Road			1		52.00	1.00	0.15	7.80		
	LHS Ch:00-52 1st Cross Road			1		52.00	1.00	0.15	7.80		
	LHS Ch:00-44 7th Cross Road			1		44.00	1.00	0.15	6.60		
	RHS Ch:00-54.3 7thCross Road			1		54.30	1.00	0.15	8.15		
	LHS Ch:00-101 9 8th Cross Road			1		101.90	1.00	0.15	15.29		
	RHS Ch:00-97.1 8th CrossRoad			1		97.10	1.00	0.15	14.57		
	Anugraha layout										
	LHS Ch:00 - 130 2nd cross road			1		130.00	1.00	0.15	19.50		
	RHS Ch:00 - 131 2nd cross road			1		131.00	1.00	0.15	19.65		
	WALL CONCRETE										
	CC Drain	Cum									
	Sai Nagar Phase-2										
	LHS Ch:00-234 1st Main Road			2		234.00	0.15	0.60	42.12		
	RHS Ch:00-213 1st Main Road			2		213.00	0.15	0.60	38.34		
	LHS Ch:00-250 2nd Main Road			2		250.00	0.15	0.60	45.00		
	RHS Ch:00-52 1st Cross Road			2		52.00	0.15	0.60	9.36		
	LHS Ch:00-52 1st Cross Road			2		52.00	0.15	0.60	9.36		
	LHS Ch:00-44 7th Cross Road			2		44.00	0.15	0.60	7.92		
	RHS Ch:00-54.3 7thCross Road			2		54.30	0.15	0.60	9.77		
	LHS Ch:00-101 9 8th Cross Road			2		101.90	0.15	0.60	18.34		
	RHS Ch:00-97.1 8th CrossRoad			2		97.10	0.15	0.60	17.48		
	Anugraha layout										
	LHS Ch:00 - 130 2nd cross road			2		130.00	0.15	0.60	23.40		
	RHS Ch:00 - 131 2nd cross road			2		131.00	0.15	0.60	23.58		
	New Culvert										
	Bottom raft			1	9	6.90	1.3	0.20	16.15		
	Side Wall			2	9	6.90	0.3	0.60	22.36		
								Total Qty	487.071	7070.20	3443689.38
5	providing and fixing precast reinforced concrete slab 10cm thick of mix M20 using 20mm and downsize graded granite metal using reinforcement 10mm dia steel at 150mm C/c both ways.										
	New cover slab										
	Sai Nagar Phase-2										
	LHS Ch:00-234 1st Main Road			1		234.00	0.90		210.60		
	RHS Ch:00-213 1st Main Road			1		213.00	0.90		191.70		
	LHS Ch:00-250 2nd Main Road			1		250.00	0.90		225.00		
	RHS Ch:00-52 1st Cross Road			1		52.00	0.90		46.80		
	LHS Ch:00-52 1st Cross Road	Sqm		1		52.00	0.90		46.80		
	LHS Ch:00-44 7th Cross Road			1		44.00	0.90		39.60		
	RHS Ch:00-54.3 7thCross Road			1		54.30	0.90		48.87		
	LHS Ch:00-101 9 8th Cross Road			1		101.90	0.90		91.71		

	RHS Ch:00-97.1 8th CrossRoad									
	Anugraha layout									
	LHS Ch:00 - 130 2nd cross road		1		97.10	0.90		87.39		
	RHS Ch:00 - 131 2nd cross road									
			1		130.00	0.90		117.00		
			1		131.00	0.90		117.90		
							Total Qty	1223.37	2337.00	2859015.69
6	Provoding and laying Precast Drain cover slabs of 250mm thick of mix M20 using graded granite jelly 20mm & downsize with steel reinforcement complete as per specification.									
	New Culvert									
	Cross Road	Sqm								
			9		6.9	1.20		74.52		
							Total Qty	74.52	5418.00	403749.36
7	Providining & fixing precaste solid concrete kerb stones of size 450X200X400mm maid out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting etc., complete. KPWD S.R 2018-1 It No 5.29.1 Pg No. 27									
	New Kerb									
	Sai Nagar Phase-2									
	LHS Ch:00-234 1st Main Road		1		234.00			519		
	RHS Ch:00-213 1st Main Road		1		213.00			473		
	LHS Ch:00-250 2nd Main Road	No's	1		250.00			555		
	LHS Ch:00-101.9 8th Cross Road		1		101.90			226		
	RHS Ch:00-97.1 8th CrossRoad		1		97.10			216		
	Anugraha layout									
	LHS Ch:00 - 130 2nd cross road		1		130.00			289		
	RHS Ch:00 - 131 2nd cross road		1		131.00			291		
							Total Qty	2569	477.00	1225193.58
8	KSRRB 800-1 Painting two coats after filling surface with synthetic enamel paint in approved shades on new plastered concrete surface with materials, labour complete as per specifications. KPWD S.R 2018-19 It No. 24.1 Pg No. 180									
	New Kerb									
	Sai Nagar Phase-2									
	LHS Ch:00-234 1st Main Road		1		234.00		0.35	81.90		
	RHS Ch:00-213 1st Main Road		1		213.00		0.35	74.55		
	LHS Ch:00-250 2nd Main Road	Sqm	1		250.00		0.40	100.00		
	LHS Ch:00-101.9 8th Cross Road		1		101.90		0.40	40.76		
	RHS Ch:00-97.1 8th CrossRoad		1		97.10		0.40	38.84		
	Anugraha layout									
	LHS Ch:00 - 130 2nd cross road		1		130.00		0.35	45.50		
	RHS Ch:00 - 131 2nd cross road		1		131.00		0.35	45.85		
							Total Qty	427.40	84.80	36243.52
9	KSRRB M300-14. Excavation for road work in all type of soil by mechanical means including cutting loading to tippers trimming bottom and side slopes in accordance with requirment of lines and cross sections and transportation with a lead of 1.00 km and complete as per specification. MORTH Specification No.301 and 4Kms Lead for disposal. KPWD S.R 2018-19 It No. 19.14 Pg No. 143									
	Sai Nagar Phase-2									
	Ch:00-102.0 8th Cross Road		1		102.00	6.80	0.30	208.08		
	Ch:00-104 9th Cross Road	Cum	1		104.00	7.00	0.30	218.40		
	BHEL Layout									
	Ch:00-104 3rd cross Road		1		102.00	6.60	0.30	201.96		
							Total Qty	628.44	57.03	35839.93
10	KSRRB 300-58. Compaction of original ground by mechanical means including filling in depression occcuring during rolling including cost of all labour, HOM complete as per specifications. MORTH I Chapter 3 KPWD S.R 2018-19 It No 19.64 Pg No. 147									
	Sai Nagar Phase-2									
	Ch:00-102.0 8th Cross Road		1		102.00	6.80		693.60		
	Ch:00-104 9th Cross Road	Sqm	1		104.00	7.00		728.00		
	BHEL Layout									
	Ch:00-104 3rd cross Road		1		102.00	6.60		673.20		
							Total Qty	2094.80	6.36	13322.93

	construction of granular sub-base grading-v as sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite material, mixing by mix in place method by rotavator at OMC spreading in uniform layers with motor grader on prepared surface and compactioning with vibratory power roller to achieve the 98% proctor density, complete as per specification. clause 401 of MORTH V revision.										
	KPWD S.R 2018-19	It No	20.60		Pg No.	153					
	Sai Nagar Phase-2										
	Ch:00-102.0 8th Cross Road		1		102.00	6.80	0.15	104.04			
	Ch:00-104 9th Cross Road	Cum	1		104.00	7.00	0.15	109.2			
	BHEL Layout										
	Ch:00-104 3rd cross Road		1		102.00	6.60	0.15	100.98			
							Total Qty	314.22	1855.00	582878.10	
12	KSRRB M400-17. Providing, Laying, Spreading and Compacting cushed stone aggregates of granite/ trap/basalt to wet Mix macadam specifications including pre mixing the materials with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base /base coarse on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specification.										
	KPWD S.R 2018-19	It No	20.18		Pg No.	155					
	Sai Nagar Phase-2										
	Ch:00-102.0 8th Cross Road		1		102.00	6.80	0.23	159.53			
	Ch:00-104 9th Cross Road	Cum	1		104.00	7.00	0.23	167.44			
	BHEL Layout										
	Ch:00-104 3rd cross Road		1		102.00	6.60	0.23	154.84			
							Total Qty	481.80	2001.28	964224.71	
13	KSRRB M500-6Providing and applying primer coat with S.S bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications. clause 502 of MORTH V revision.										
	KPWD S.R 2018-19	It No	21.6		Pg No.	158					
	Sai Nagar Phase-2										
	Ch:00-102.0 8th Cross Road		1		102.00	6.80		693.6			
	Ch:00-104 9th Cross Road	Sqm	1		104.00	7.00		728			
	BHEL Layout										
	Ch:00-104 3rd cross Road		1		102.00	6.60		673.2			
							Total Qty	2094.80	33.92	71055.62	
14	KSRRB 500--11 Providing and laying bituminous macadam using 40/60 TPH Capacity H.M.P. with Mechanical paver Gr-II(50mm to75mm) with 3.4% VG-30 Bitumenon prepared surface with crushed coarse aggregates as per desing mix formula for base/ binding coarse including loading of aggregates with F.E> loader, hot Mixing of stone aggregates and bitumen in hot mix plant,transporting the mixed materials in tippers to paver and laying mixed materials with paver finisher to the required and grade complete as per specifications.										
	KPWD S.R 2018-19	It No	21.20		Pg No.	158					
	Sai Nagar Phase-2										
	Ch:00-102.0 8th Cross Road		1		102.00	6.80	0.05	34.68			
	Ch:00-104 9th Cross Road	Cum	1		104.00	7.00	0.05	36.4			
	BHEL Layout										
	Ch:00-104 3rd cross Road		1		102.00	6.60	0.05	33.66			
							Total Qty	104.74	5962.50	624512.25	
15	KSRRB 500--10 Providing and applying tack coat using 80/100 grade Sqm bitumen(VGIO) in boiler fitted with spray set distributor at the rate of 0.25 kg per Sqm on the existing prepared bituminous surface cleaned with mechanical broom, complete as per specifications. clause 503 of MORTH V revision.										
	KPWD S.R 2018-19	It No	21.7		Pg No.	158					
	Sai Nagar Phase-2										
	Ch:00-102.0 8th Cross Road		1		102.00	6.80		693.60			
	Ch:00-104 9th Cross Road	Sqm	1		104.00	7.00		728.00			
	BHEL Layout										
	Ch:00-104 3rd cross Road		1		102.00	6.60		673.20			
							Total Qty	2094.80	12.72	26645.856	

	providing and laying bituminous concrete 40mm thick with hot mix plant, using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminous binder consisting of 4.97% of VG-30 bitumen(60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site laying with a paver finisher to required grade level and allignment rooling with smooth wheeled vibratory and tandem rollers to achive the desired compaction in all respects complete as per specifications									
	KPWD S.R 2018-19	It No	21.78.12	Pg No.	171					
	Sai Nagar Phase-2	**Cum**								
	Ch:00-102.0 8th Cross Road		1		102.00	6.80	0.04	27.74		
	Ch:00-104 9th Cross Road		1		104.00	7.00	0.04	29.12		
	BHEL Layout									
	Ch:00-102 3rd cross Road		1		102.00	6.60	0.04	26.93		
							Total Qty	83.79	8699.42	728941.80
17	KSRRB M800-13. Road marking with hot applied thermoplastic compound with reflectrising glass beads on bituminous surface / concrete surface : providing and laying of hot applied thermo plastic compound 2.5mm thick including reflectorising glass beads at 250gms per sqm area thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35 standards specified.complete as per specifications.									
	KPWD S.R 2018-19	It No	24.15	Pg No.	182					
	Edge lane	**Sqm**								
	Sai Nagar Phase-2									
	Ch:00-102.0 8th Cross Road									
	Road Both side		1	2	102.00	0.1		20.40		
	Road Center		0.5	1	102.00	0.1		5.10		
	Ch:00-104 9th Cross Road									
	Road Both side		1	2	104.00	0.1		20.80		
	Road Center		0.5	1	104.00	0.1		5.20		
	BHEL Layout									
	Ch:00-104 3rd cross Road									
	Road Both side		1	2	102.00	0.1		20.40		
	Road Center		0.5	1	102.00	0.1		5.10		
							Total Qty	77.00	454.74	35014.98
18	KSRRB M800-35. Supply and installation of molded shank raised pavment markers made up of poly carbonate and ABS (acrylonitrile Butadiene styrene) molded body and reflective pannels with microprismatic lens capable of providing total internal reflection of the light entering the lense face and shall support load of 16000 KG tested in accordance to specifications of catagory A of MORTH circular No. RW/NH/33023/10-97 - DO III Dt 11.06.1997. the height width and length shall not exceed 50mm, 100mm and 102mm and with minimum reflective area of 135qcm on each side and the slope to the base shall be 35o the strength of detachment of the intergated cylindrical shanks (of diameter not less than 19mm and height not less than 30mm) from the body is to be a minimum value of 500KG. fixing will be by drilling hole on the road for the shanks to go inside, with out nails and using Epoxy resin based adhesive as per manufacuter recommendations and complete as directed by the engineer									
	KPWD S.R 2018-19	It No.	24.41	Pg No.	187					
	Sai Nagar Phase-2									
	Ch:00-102.0 8th Cross Road		1	3	23			69.00		
	Ch:00-104 9th Cross Road		1	3	23			69.00		
	BHEL Layout									
	Ch:00-104 3rd cross Road		1	3	22			66.00		
							Total Qty	204.00	357.22	72872.88
19	Directions and place indentification signs with size morethan 0.9 size board: providing and erecting directions and place identification retro- reflectorised sign as per IRC :67 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area not exceeding 0.9 sqm supported on a mild steel single angel iron post 75X75X6 mm 2 Nos. firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45X45X60 cm, 60 cm below ground level as per approved drawing.									
	KPWD S.R 2018-19	It No	24.4	Pg No.	180					
	Cross Roads	Sqm	3		0.9		0.9	2.43		

Total Qty	2.43	7557.8	18365.45
		Total Construction cost	14783938.92
		12% GST	1774072.671
		Design report, proof checking & PMC Amount	350000.00
		Add KRIDL charges 4%	591357.56
		Sub Total	17499369.15
		Miscellaneous and rounding off	630.85
		Grand total	17500000

Certificate:-

1. The workspot Was inspected and work is found to be necessary.
2. The area comes with in the BBMP limits.
3. The rates adopted are based on the PWD S.R Bangalore circle for year 2018-19.
4. The provisions made in the estimation are necessary and essintial.

Assistant Engineer.

Assistant Executive Engineer.

Executive Engineer.

Technical Sanction
Accorded For RS 1.75 lakhs only
Head of A/C. 3744
CER NO : ..... **Dt:** 15.09.2021